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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,787

06/19/2006

Norbert Klingelhage

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EXAMINER

FLETCHER III, WILLIAM P

ART UNIT

PAPER NUMBER

1717

MAIL DATE

DELIVERY MODE

09/21/2011

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,787	<b>Applicant(s)</b> KLINGELHAGE ET AL.	
	<b>Examiner</b> WILLIAM PHILLIP FLETCHER III	<b>Art Unit</b> 1717	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 5) ☒ Claim(s) 1-3,5,8-10,12,13 and 15-24 is/are pending in the application.
- 5a) Of the above claim(s) 18-21 is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1-3,5,8-10,12,13,15-17 and 22-24 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4 April 2011 has been entered.

### ***Response to Amendment***

2. Claims 1-3, 5, 8-10, 12, 13, and 15-24, are now pending.

### ***Election/Restrictions***

3. Claims 18-21 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 15 October 2009.

### ***Response to Arguments***

4. Applicant has presented no new arguments in addition to those presented after final 4 April 2011 and the Primary Examiner's response is reproduced herein from the advisory action mailed 8 April 2011.

5. Independent claim 1 requires *providing a bonding agent between the product or layer and the nonwoven during the production of the composite, comprising either: (i) mixing the bonding agent with the PU to form a PU-bonding agent blend or (ii) applying the bonding agent to the nonwoven in the molten state.* As stated previously in the

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record, while the claim is open to the bonding agent's being different from the PU product, it does not have to be. In other words, in embodiment (i) above, the PU reads on both the PU and the bonding agent and the PU composition reads on the claimed PU-bonding agent blend. In embodiment (ii) above, the PU is applied in a molten state, thereby reading on this limitation as well. Since the PU (16) serves to bond PP substrates (14) and (15) together, it reads on the claimed bonding agent. The region of thickness of the PU layer (16) closest to the PP substrates and (15) thus reads on the claimed bonding agent between the PU product and the PP nonwoven. Further, EP '779 teaches that the PU is extruded in a molten state.

6. With respect to the newly-added claims 22 and 24, while the Primary Examiner holds that the term *different* is not fully supported by the originally-filed disclosure (see below), it is clear the single PU bonding agent of the reference does not read on the limitations of these claims.

7. With respect to newly-added claim 23, the limitations of this claim are met by the reference as illustrated in Fig. 17 below, where applicator (9) applies PU (16) upstream of the pressing area (13).

### ***Claim Objections***

8. Claims 22 and 24 are objected to because of the following informalities: For clarity, these claims should read *and the heated product or layer comprising (PU)*. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 22 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims recite merely that the bonding agent is *different*. This term encompasses every possible difference, from compositional differences to structural differences — the full spectrum of which is not supported by the disclosure as originally filed.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

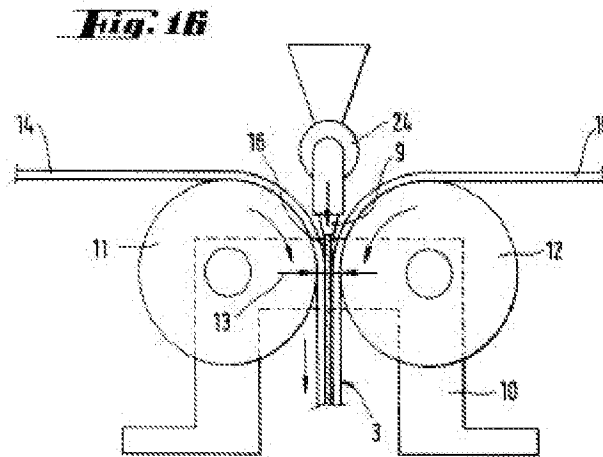
12. Claims 1, 2, 5, 9, 10, 15-17, and 23, are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 700 779 A2.

A. Since this reference was cited in the International Preliminary Examination Report for PCT/EP2004/014233, of which the instant application is the National Stage Entry, Applicant is presumed to be familiar with the reference and its teachings.

B. Claims 1, 9, 10, and 17

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- i. The claimed process is anticipated by this reference in which a water-vapor permeable PU layer is applied to a PP substrate:



- ii. The Primary Examiner notes that, while the claim is open to the bonding agent's being different from the PU product, it does not have to be. As such, since the PU (16) serves to bond PP substrates (14) and (15) together, it reads on the claimed bonding agent. The region of the thickness of the PU layer (16) closest the PP substrates (14) and (15) thus reads on the claimed bonding agent between the PU product and the PP nonwoven. Further, EP '779 teaches that the PU is extruded in a molten state [see p. 4 of the machine translation, full paragraphs 7, 9, and 10, for example].
- iii. Since claim 17 has been amended to recite polyurethane alone, and the claim is now anticipated by EP '779.

C. Claim 2

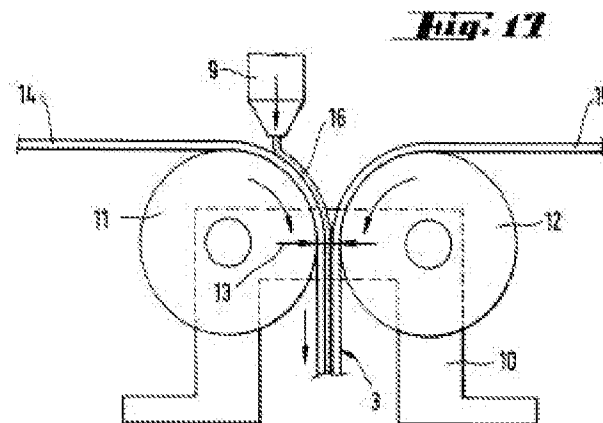
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i. As illustrated above, extrusion of PU (16) occurs directly in the region of pressing.

D. Claims 5, 15, and 16

i. The Examiner notes that, while the claim is open to the bonding agent's being different from the PU product, it does not have to be. As such, since the PU (16) serves to bond PP substrates (14) and (15) together, it reads on the claimed bonding agent. The region of the thickness of the PU layer (16) closest the PP substrates (14) and (15) thus reads on the claimed bonding agent between the PU product and the PP nonwoven.

ii. Further, insofar as this reference also discloses an embodiment in which a portion of the PU layer (16) is applied before later portions of the same layer,



and any portion of the PU layer (16) may also satisfy the claimed "bonding agent" (see above), this embodiment satisfies the claimed providing the bonding agent "prior to applying the PU layer."

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iii. The above-mentioned embodiments further satisfy the limitations of claims 15 and 16.

E. Claim 23

i. the limitations of this claim are met by the reference as illustrated in Fig. 17 above, where applicator (9) applies PU (16) upstream of the pressing area (13).

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claim 8 remains rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 700 779 A2.



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A. While EP '779 does not expressly teach the limitations of these claims, it is the Examiner's position that, since the reference is not limited to the preferred PU composition, any known PU material capable of bonding PP may advantageously be used. It is the Examiner's position that such a reactive hot-melt is such a material and would have been readily apparent to one skilled in the art as an obvious expedient for joining the two PP substrates, absent evidence to the contrary. Further, when the PU layer is interpreted as the bonding agent material as well (see above), the limitation requiring that it be "so applied onto the PP nonwoven as a bonding agent that it has not cooled down yet when coming into contact with the extruded PU product."

16. Claim 3 remains rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 700 779 A2, as applied to claim 1 above, further in view of US 2005/0227086 A1.

A. EP '779 does not expressly recite that the PP non-woven is preheated.

B. US '086 teaches a process for the formation of a roof underlay in which a PP substrate is coated with PU. The PP substrate fabric is preheated as an added means of obtaining maximum adhesion of the PU [0045].

C. Consequently, it would have been obvious to one skilled in the art to modify the process of EP '779 so as to preheat the non-woven for this reason.

17. Claims 12 and 13 remain rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 700 779 A2, as applied to claim 1 above, further in view of US 2005/0097857 A1.

A. EP '779 does not teach the claimed mixture of materials.

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B. US '857 teaches that, in order to improve the adhesion of materials to PP, maleic anhydride-modified polyolefin may be utilized [0034-0035]. This reference further teaches that incorporation of a bonding agent into PU material applied to a PP substrate will further improve adhesion [0041].

C. Consequently, it would have been obvious to incorporate an adhesion promoter into the PU to achieve that end. It would have been further obvious to utilize a known adhesion promoter of PP substrates, such as the disclosed maleic anhydride-modified polyolefin.

D. Finally, with specific respect to 13, the amount of adhesion promoter incorporated is a result-effective variable, affecting the degree of adhesion achieved. Consequently, it would have been obvious to one skilled to optimize the amount of adhesion promoter by routine experimentation, absent evidence of criticality.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM PHILLIP FLETCHER III whose telephone number is (571)272-1419. The examiner can normally be reached on Monday through Friday, 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571) 272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Phillip Fletcher III/  
Primary Examiner, Art Unit 1792

16 September 2011